Northern Territory Naturalist (2007) 19: 51-53

A "lost years" Flatback Turtle *Natator depressus* (Garman, 1858) found

Damian White[1] and Jethro Gill[2]

[1] WWF-Australia, GPO Box 1268, Darwin, NT 0801.
[2] Deep Tempest, 63 Sergison Cct., Nightcliff, NT 0810.

Post-hatchling marine turtles are generally considered to be those that have completed their frenzied swim away from the nesting beach, absorbed their internal yolk sac in the process and entered the pelagic stage of their lifecycle; a phase which ends when they switch to benthic food items on the continental shelf (Limpus *et al.* 1991). The period between hatching and later appearing in coastal waters is known as the "lost years", as juvenile marine turtles are infrequently observed during this period (Carr 1982). The following is a record of a post-hatchling Flatback Turtle *Natator depressus* that was recorded near the edge of the continental shelf in northern Australia.

In November 2005, a healthy juvenile turtle attracted to the lights of the *FV Deep Tempest* was dip-netted at the surface in 95 metres of water, 111 kilometres north-east of Cape Van Diemen (10° 12' S, 130° 40' E; Figure 1). The verifying photograph accompanying the report revealed the turtle to be a post-hatchling Flatback Turtle with a straight carapace length (SCL) of 70 mm (Figure 2).

This record represents the smallest post-hatchling Flatback Turtle yet recorded. There are 140 published records of post-hatchling Flatback Turtles currently available (Table 1), the smallest of which is a record of a post-hatchling found beneath a White-bellied Sea-eagle *Haliaeetus leucogaster* feeding station on the east coast of Queensland with an estimated SCL of 113 mm (Walker 1991a). The smallest previous record of a post-hatchling Flatback Turtle in Northern Territory waters was an individual of 122 mm SCL, also collected from beneath a Sea-eagle feeding station (Walker 1991b).

Flatback Turtles appear to lack an oceanic stage in their development and instead complete their early development over the Australian continental shelf, where they are common in turbid waters between 5 and 20 m and rare at depths of greater than 45 m (Walker & Parmenter 1990). Walker and Parmenter (1990) came to their conclusion after examining available post-hatchling records of animals living within a few kilometres of the coast and in waters of less than 60 m. However, specimens of less than 113 mm SCL are missing from these records. This record indicates that the post-hatchling phase of Flatback Turtles in northern Australia may include a wider range of habitats than previous records suggest.

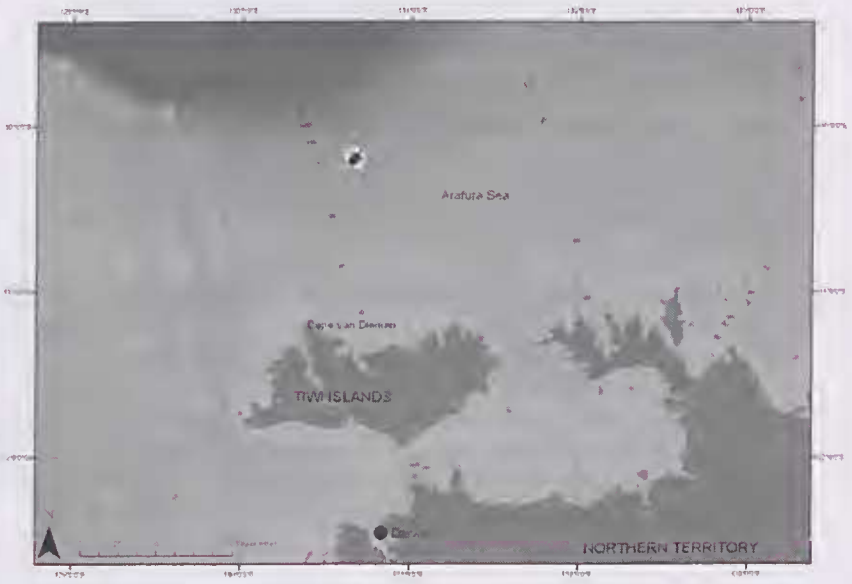

Figure 1. Location of post-hatchling Flatback Turtle when dip-netted.

Figure 2. Post-hatchling Flatback Turtle shortly before being released.

Table 1. Post-hatchling Flatback Turtle records from Australian waters, collection type, number of individuals and source of records.

State	Collection type	N	Range (mm)	Reference
WA	Terrestrial	2	160 CCL*	Chevron Australia 2005
WA	Beach-washed	5	121–145 SCL†	Prince 1996
NT	Beach-washed in derelict fishing nets	6	198–290 SCL†	Roeger *et al.* 2004
WA, NT, QLD	Sea eagle feeding stations, gillnets, trawl bycatch, tiger shark stomach contents, beach-washed or observed in estuary or coastal waters	127	113–320 SCL†	Limpus *et al.* 1991

*Curved carapace length †Straight carapace length

Acknowledgements

The authors would like to thank Dr Scott Whiting for comments during draft preparation and the loan of reference materials, and Karen Cook for providing the map featured in this note.

References

Carr A.F. (1982) Notes on the behavioural ecology of sea turtles. In *Biology and Conservation of Sea Turtles* (ed. K.A. Bjorn), p.19. Smithsonian Institution Press, Washington.

Chevron Australia. (2005) Draft Environmental Impact Statement/Environmental Review Management Program for the Proposed Gorgon Development: Technical Appendix C7, Sea Turtles. ChevronTexico Australia, Perth.

Limpus C.J., Walker T.A. and West J. (1991) Post hatchling specimens and records from the Australian region. In *Proceedings of the Workshop on Marine Turtle Conservation*, September 1990 (ed. R. James), pp. 95-100. Australian National Parks and Wildlife Service and Australian Nature Conservation Agency.

Prince R.I.T. (1996) First records of stranded juvenile flatback turtles, and some new records of stranded juvenile hawksbill turtles from the southwest coast of Western Australia. *Marine Turtle Newsletter* 72, 5.

Roeger S., Munungurr M. and Wise P. (2004) *Entanglement of Miyapunu (Marine Turtles) in Ghost Netting: Northeast Arnhem Land, Northern Territory, Australia.* Dhimurru Land Management Aboriginal Corporation, Nhulunbuy NT.

Walker T.A. (1991a) Juvenile Flatback turtles in proximity to coastal nesting islands in the Great Barrier Reef Province. *Journal of Herpetology* 25 (2), 246-248.

Walker T.A. (1991b) Post-hatchling turtles off Northern Australia. *Marine Turtle Newsletter* 55, 6.

Walker T.A. and Parmenter C.J. (1990) Absence of a pelagic phase in the life cycle of the flatback turtle, *Natator depressa* (Garman). *Journal of Biogeography* 17, 275-278.